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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,356	12/28/2004	Bertram Cezanne	MERCK-2952	4530
23599 7590 01/31/2007 MILLEN, WHITE, ZELANO & BRANIGAN, P.C. 2200 CLARENDON BLVD. SUITE 1400 ARLINGTON, VA 22201			EXAMINER KOSACK, JOSEPH R	
			ART UNIT	PAPER NUMBER
			1626	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/31/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/519,356	<b>Applicant(s)</b> CEZANNE ET AL.	
	<b>Examiner</b> Joseph Kosack	<b>Art Unit</b> 1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-26, 29-51, 54-56 and 58 is/are pending in the application.
- 4a) Of the above claim(s) 4, 5 and 32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-18, 26, 29-31, 33, 45-51, 54-56 and 58 is/are rejected.
- 7) ☒ Claim(s) 19-25 and 34-44 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

Claims 1-26, 29-51, 54-56, and 58 are pending in the instant application.

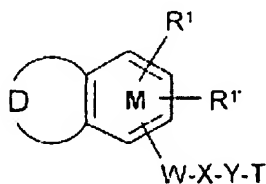
#### *Withdrawal of Finality of Previous Action*

The finality of the previous action is withdrawn in the view of a new rejection detailed in this action that was not necessitated by amendment. The amendment filed on November 3, 2006 has been entered into the application file.

#### *Status of the Claims*

Claims 1-3, 6-31 and 33-58 were objected to for containing elected and non-elected subject matter. Claims 27-28, 31, 33, 52-53, and 57 were rejected under 35 U.S.C. 112, first paragraph for lack of scope of enablement.

By virtue of the petition decision of January 4, 2007, the scope of elected subject matter has been expanded. The scope of the invention will be now limited to the



following substitutions of the base structure

where:

- D is absent;
- M is a phenyl ring;
- W is pyrazole attached to the M-phenyl ring via the 1 position;
- X is CONH attached in the 5 position of the pyrazole ring;
- CF<sub>3</sub> is at the 3 position of the pyrazole ring;
- All other substituents are as defined.

Claims 4-5 and 32 stand fully withdrawn as not containing elected subject matter. Claims 1-3, 6-31, and 33-58 (in part) stand withdrawn as containing elected and non-elected subject matter.

***Previous Claim Objections***

Claims 1-3, 6-31, and 33-58 were objected to in the action mailed April 20, 2006 for containing elected and non-elected subject matter. Claims 27-28, 52-53, and 57 have been cancelled, therefore the objection is withdrawn for those claims. The amendment filed November 3, 2006 has not cancelled the non-elected subject matter, and the objection is maintained for the remainder of the claims.

***Previous Claim Rejections - 35 USC § 112***

Claims 27-28, 31, 33, 52-53, and 57 were rejected in the actions mailed April 20, 2006 and September 15, 2006 under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for treating thromboembolic disorders such as thrombosis and myocardial infarction, does not reasonably provide enablement for treating other diseases such as tumors and inflammation. The claims have either been cancelled or amended to exclude the non-enabled subject matter, and the rejection is withdrawn.

***Specification***

The disclosure is objected to because of the following informalities: incorrect nomenclature of chemical compounds. Numbering of a pyrrazole ring begins with the nitrogen with no double bonds connected to it and proceeds in the direction of the next nitrogen around the ring. Correction is required.

Appropriate correction is required.

***Claim Objections***

Claims 1-3, 6-26, 29-31, 33-51, 54-56, and 58 are objected to for containing elected and non-elected subject matter. The elected subject matter have been identified supra.

Claim 25 is objected to as for containing incorrect chemical nomenclature. Numbering of a pyrrazole ring begins with the nitrogen with no double bonds connected to it and proceeds in the direction of the next nitrogen around the ring. Correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

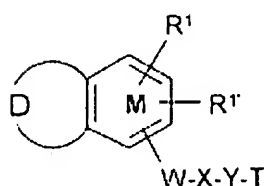
1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

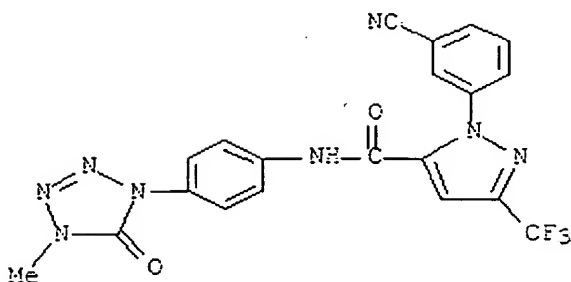
Claims 1-3, 6-18, 26, 29-33, 45-51, 54-56 and 58 rejected under 35 U.S.C. 103(a) as being unpatentable over Pinto et al. (WO 98/28269) in view of Patani et al. (*Chemical Reviews*, 1996, 3147-3176).

The instant invention is drawn to compounds of the formula



where: D is absent; M is a phenyl ring; W is pyrazole attached to the M-phenyl ring via the 1 position; X is CONH attached in the 5 position of the pyrazole ring; CF<sub>3</sub> is at the 3 position of the pyrazole ring; and all other substituents are as defined. The instant invention is additionally drawn to compositions, a method of production, and methods of use of the compounds.

Determination of the scope and content of the prior art (MPEP §2141.01)



Pinto et al. teach the compound: . The compound is made by performing an amide coupling reaction. See pages 196-197.

Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)

Pinto et al. do not teach the substitution of aminomethyl or carboxamide for the cyano group of the instant compound or the substitution of imide for carbonyl on the tetrazole ring.

Finding of prima facie obviousness--rational and motivation (MPEP §2142-2413)

Pinto et al. teach that the above compound must be reacted to form an amidine. However, Pinto et al. also teaches various compounds where the cyano group is replaced either by aminomethyl or carboxamide and have functions as Factor Xa inhibitors. See Table 1b, pages 287-295 and page 1.

Patani et al. teach that a carbonyl can be replaced by an imine and a C=S. See page 3155, "Divalent Replacements Involving Double Bonds."

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention was made to follow the synthetic scheme of Pinto et al. with the replacement suggested by Patani et al. to make the claimed invention. The motivation to do so is provided by Patani et al. Patani et al. teach the use of

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bioisosterism to refine lead compounds into safer and more clinically effective agents.

See page 3147.

Thus, the claimed invention as a whole was *prima facie* obviousness over the combined teachings of the prior art.

### **Conclusion**

Claims 1-3, 6-18, 26, 29-31, 33, 45-51, 54-56 and 58 are rejected. Claims 1-3, 6-26, 29-31, 33-51, 54-56, and 58 are objected to. Claims 19-25, 34-44 are currently free of the art.

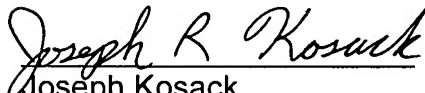
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Kosack whose telephone number is (571)-272-5575. The examiner can normally be reached on M-F 5:30 A.M. until 2:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph McKane can be reached on (571)-272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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